UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

JULY 1969

PART II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

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U. S. Department of the Interior
Bureau of Commercial Fisheries
Fishery-Oceanography Center
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*Part 1 - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, U. S. Custom House, Terminal Island, California

R/V DAVID STARR JORDAN TO SURVEY WEST COAST ALBACORE GROUNDS

BCF R/V DAVID STARR JORDAN will depart from San Diego August 18 on an albacore-oceanography cruise. The proposed cruise track (see Plate 1) traverses approximately 4800 miles, covering the nearshore district from Point Arena to Cape Flattery and offshore up to 220 miles.

R/V JORDAN will seek to establish the distribution and availability of albacore tuna in the middle to late portion of the fishing season. Survey lines are intended to sample the region inshore as well as offshore from the upwelling fronts, and to observe conditions near the northern limits of the fishery. Other features of the cruise will include: extension of our knowledge of the relation between albacore and their environment; to examine the thermal structure of the upper layer of the sea within important fishing areas; to examine the food distribution within these areas; and to study life history, physiology and movements of albacore tuna by tagging and releasing fish in good condition, and by laboratory experiments aboard ship.

The cruise schedule will include a port call at Newport, Oregon, on or about September 9. JORDAN will return to San Diego on September 19.

Last year, during the July 15-August 16 interval, JORDAN staged an albacore-oceanography survey of the oceanic regime out to 135° W off northern California, Oregon, and Washington. Albacore were taken every day on all sections of the survey grid (see August 1968, issue of this publication for details). The computed catch-per-effort data gave good indications of commercial fishing potential from 127° W to 131° W and from 40° N to 46° N; outside this belt, catch rates fell off appreciably, indicating that the commercial fishing potential of the district from 131° W to 135° W was less lucrative at increasing distances from the coast.

In contrast, this year's cruise is intended to concentrate on the meridional zone between 127° W and 129° W where catch rates were maximal in last year's survey. The smaller survey grid will permit concentration on physical and biological conditions on a relatively fine scale; contrasts between nearshore and oceanic regimes will be given careful scrutiny.

Each morning during JORDAN's cruise, a broadcast will be made on the ship-to-ship frequency (2638 kHz) summarizing the previous day's activities and prevailing weather conditions just prior to broadcast time. These summaries will be issued on or after 0845 PDT each day. Commercial and sportfishing vessels are invited to monitor our broadcasts from August 20 to September 17 when JORDAN is underway in the survey area.

August 8, 1969

Glenn A. Flittner, Leader
Fishery-Oceanography Program

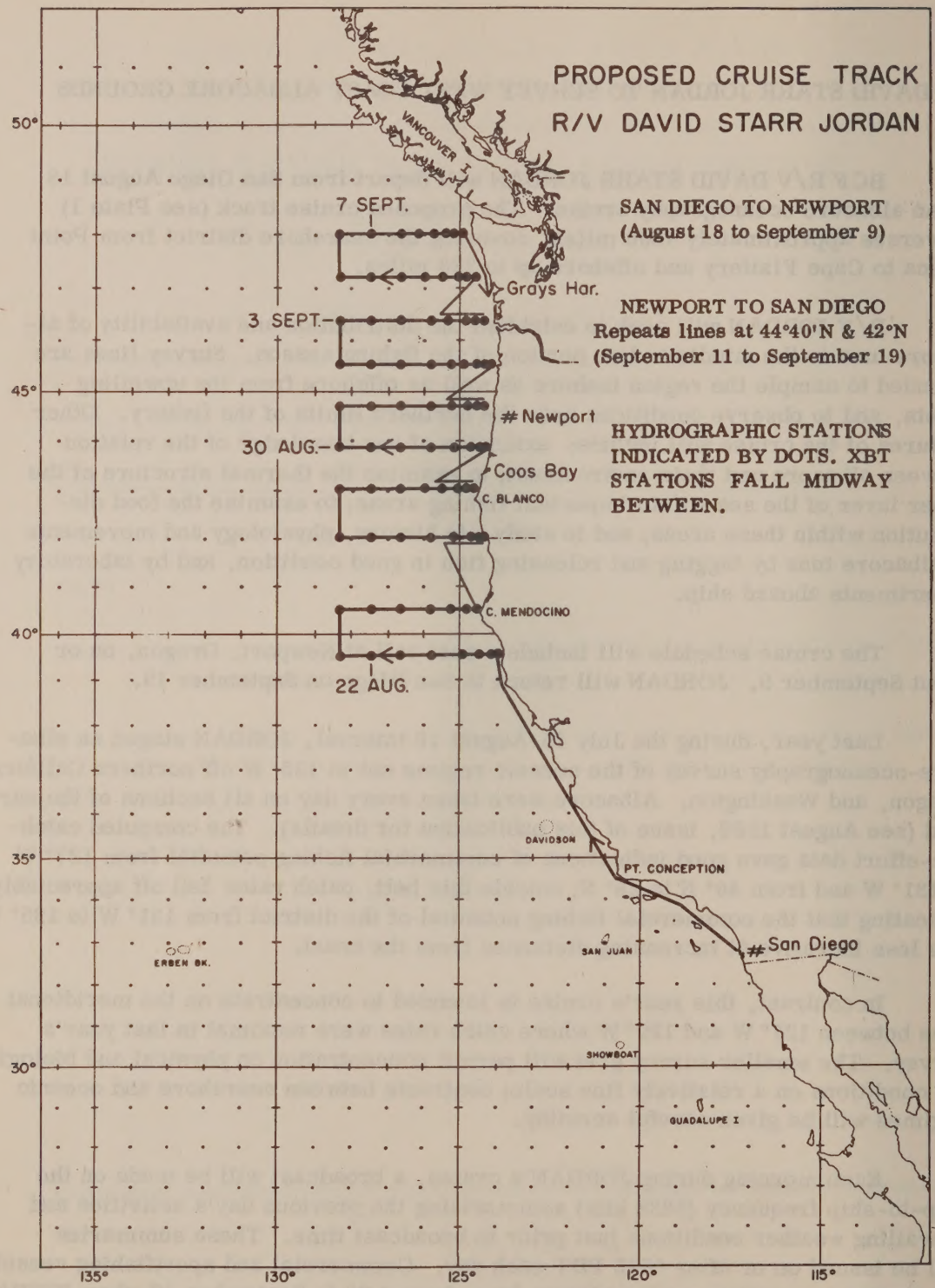


Plate 1 -- Proposed cruise track of BCF R/V DAVID STARR JORDAN, August 18-September 19, 1969.

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JULY 1969

Acknowledgements

The following organizations and stations contributed data for the June 1969 charts:

U. S. Bureau of Commercial Fisheries Biological Laboratories La Jolla, California, Honolulu, Hawaii and Seattle, Washington
U. S. Naval Weather Service, Fleet Numerical Weather Central, Monterey, California
Environmental Science Services Administration
U. S. Weather Bureau, San Diego, California
U. S. Coast and Geodetic Survey, Pacific Marine Center, Seattle, Washington
Fish Commission of Oregon, Clackamas, Oregon
Hopkins Marine Station, Pacific Grove, California, J. P. Balesteri
Inter-American Geodetic Survey by David Ortega at Manzanillo, Mexico; D. Chaves at Talara, Peru; E. Portocarrero at San Juan, Peru; Arica, Antofagasta, Caldera, Valparaiso, Talcahuano, Chile, through the courtesy of St. Hellmuth A. Sievers C. at the Instituto Hidrografico de la Armada, Valparaiso, Chile.
Kelco Company, San Diego, California
Matson Navigation Company, San Francisco; S. S. CALIFORNIAN
Oregon State University, Corvallis, Oregon
Pacific Missile Range, Range Operations Department, Geophysics Division Point Mugu, California
Scripps Institution of Oceanography, La Jolla, California by Margaret Robinson and Hans Klein
Scripps Institution of Oceanography Research Vessels; ALEXANDER AGASSIZ, THOMAS WASHINGTON, ARGO, ALPHA HELIX
Van Camp Sea Food Company, Division of Ralston Purina Company, Terminal Island, California
Fishing Vessels; MARTINAC, TYPHOON, RON H.

Charts

Figure 1.--Mean sea surface temperatures (°F) derived from approximately 8000 observations. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H. O. 225. Hatched areas are colder in 1969.

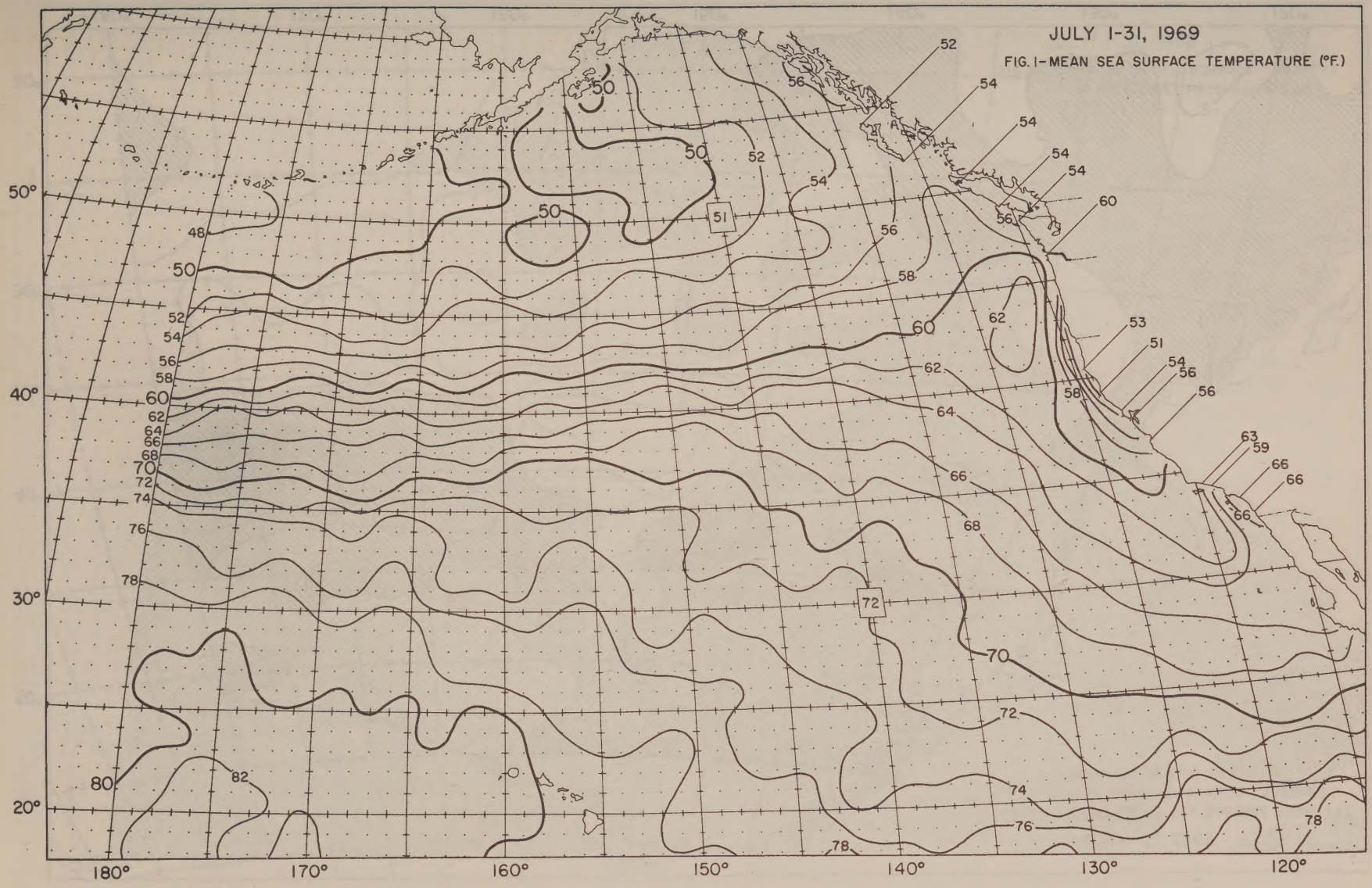
Figure 3.--Deviation of sea surface temperatures (°F) from those of July 1968. Hatched areas are colder in 1969.

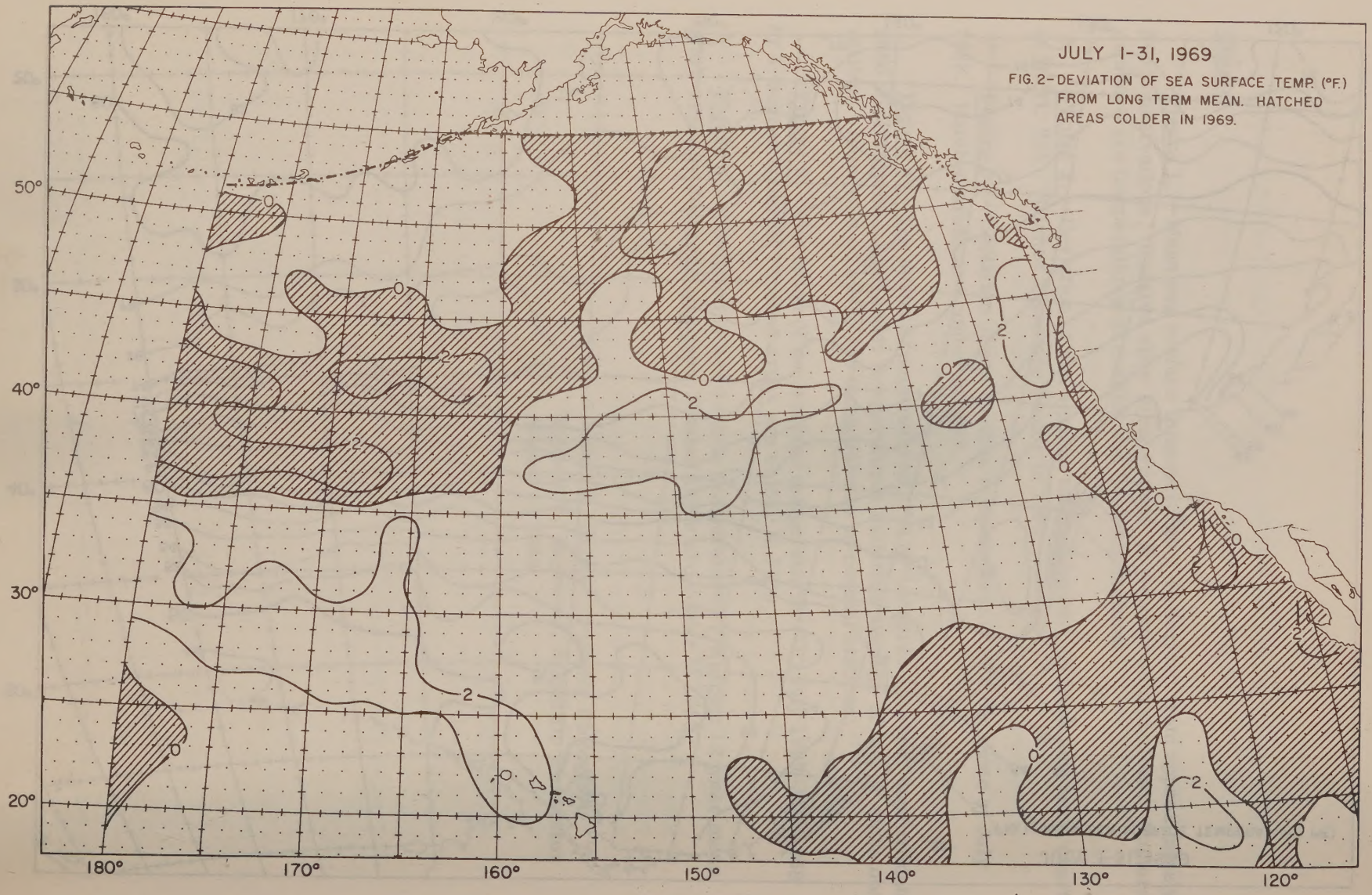
Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

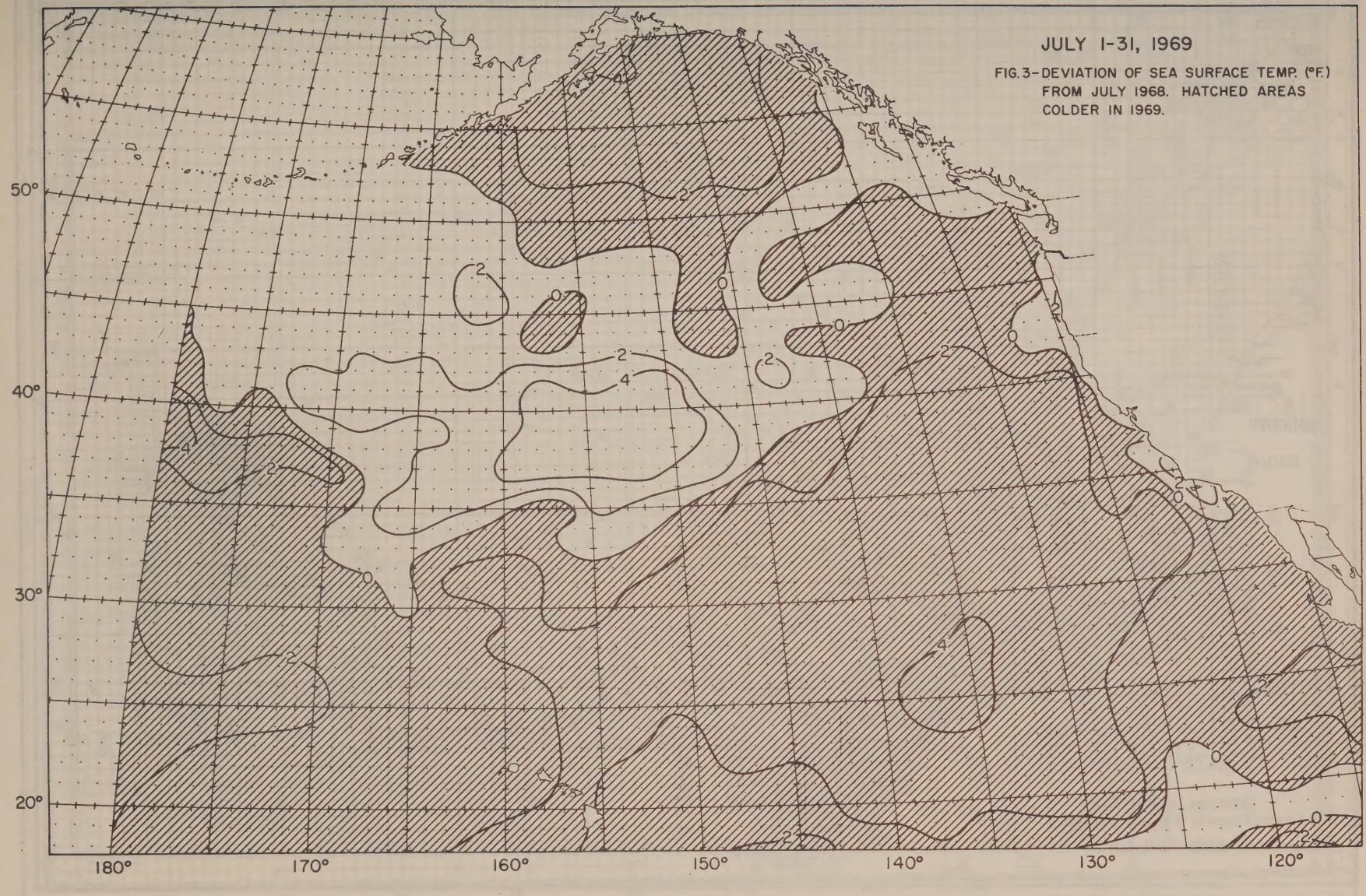
Figure 5.--Deviation of sea surface temperatures (°F) July 1969-July 1968 by 1-degree squares. Shaded areas are colder in 1969.

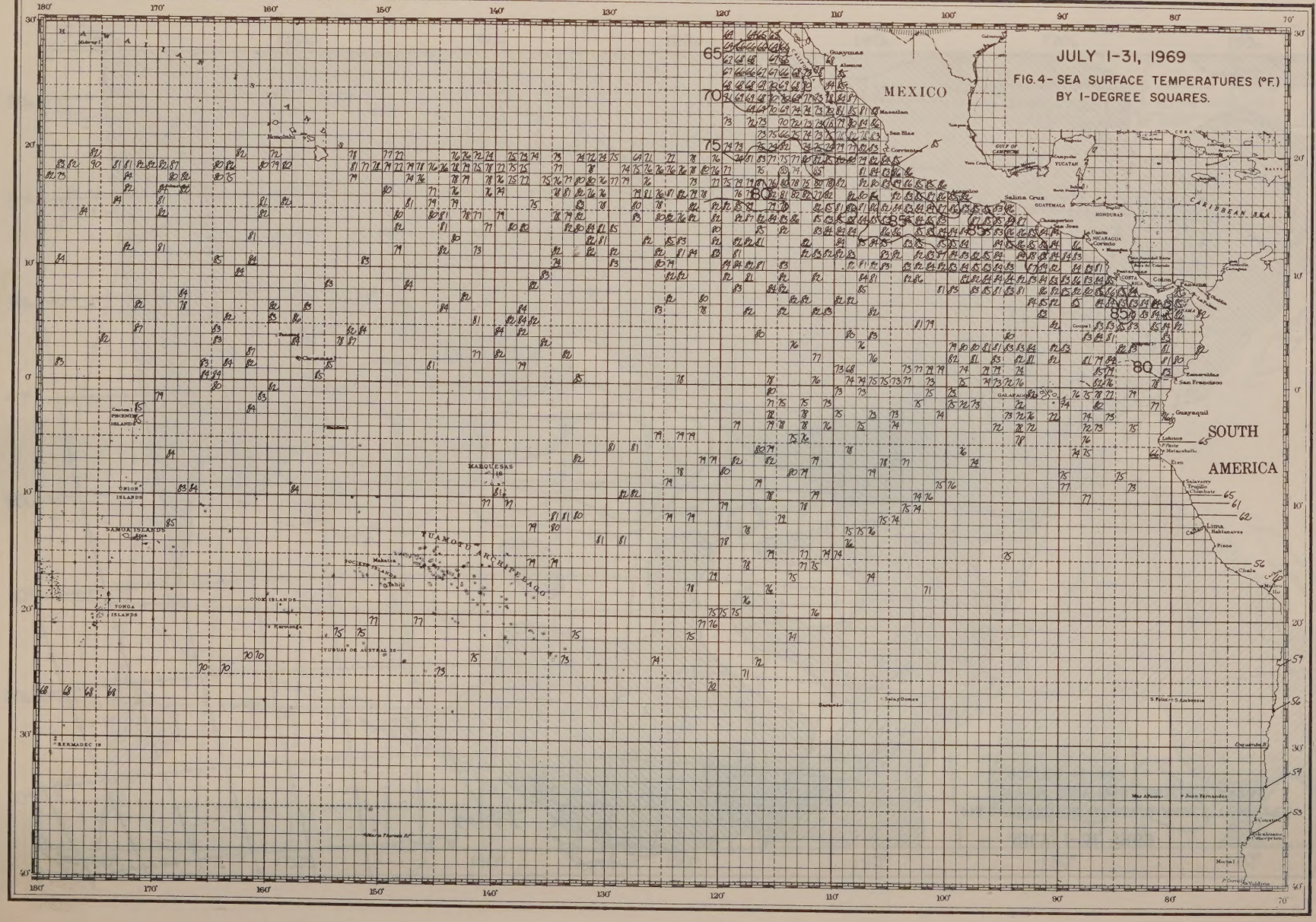
Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder in 1969.

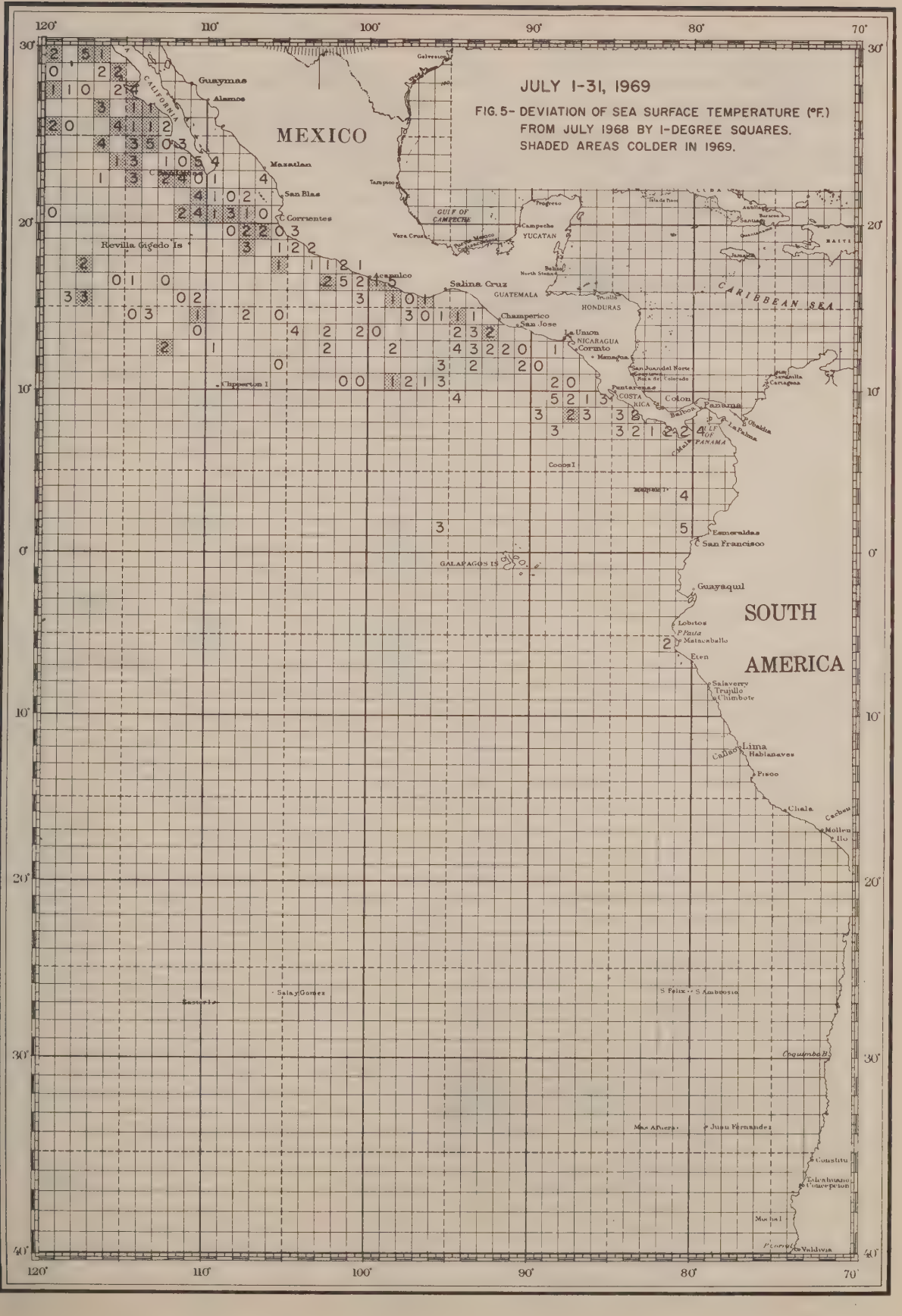
James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
August 8, 1969

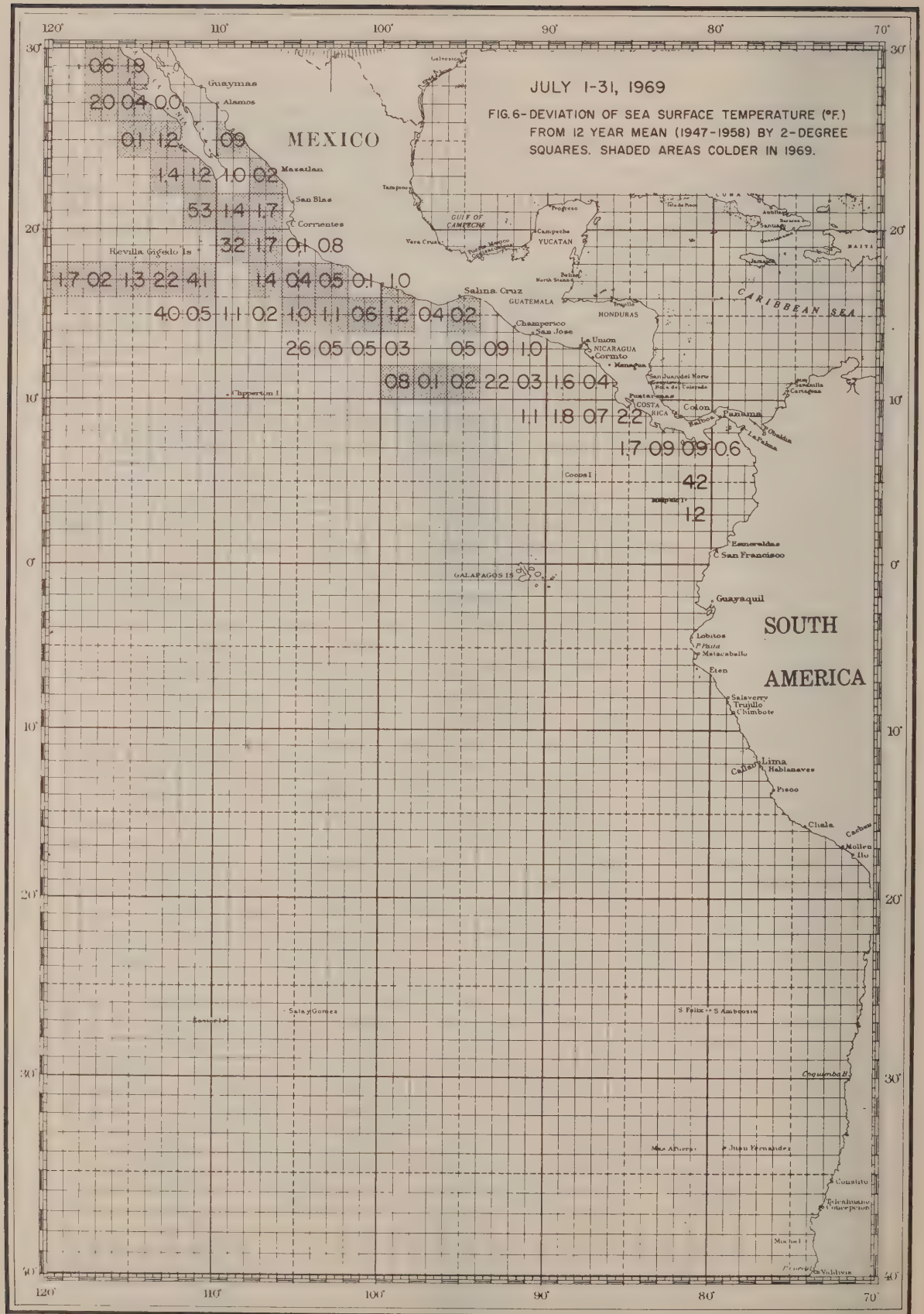

JULY 1-31, 1969
FIG. 1-MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

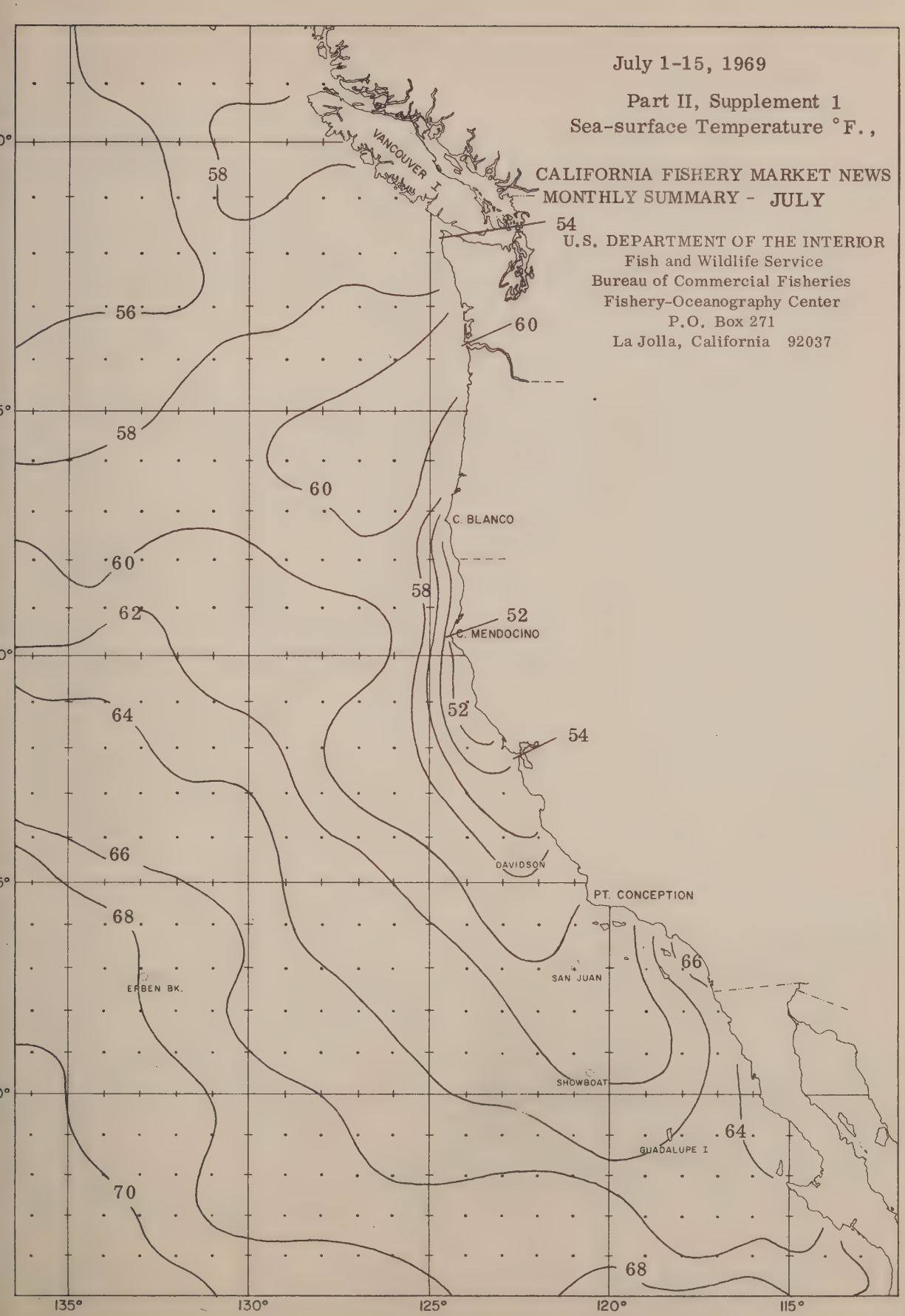

JULY 1-31, 1969
FIG. 2 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
0
2

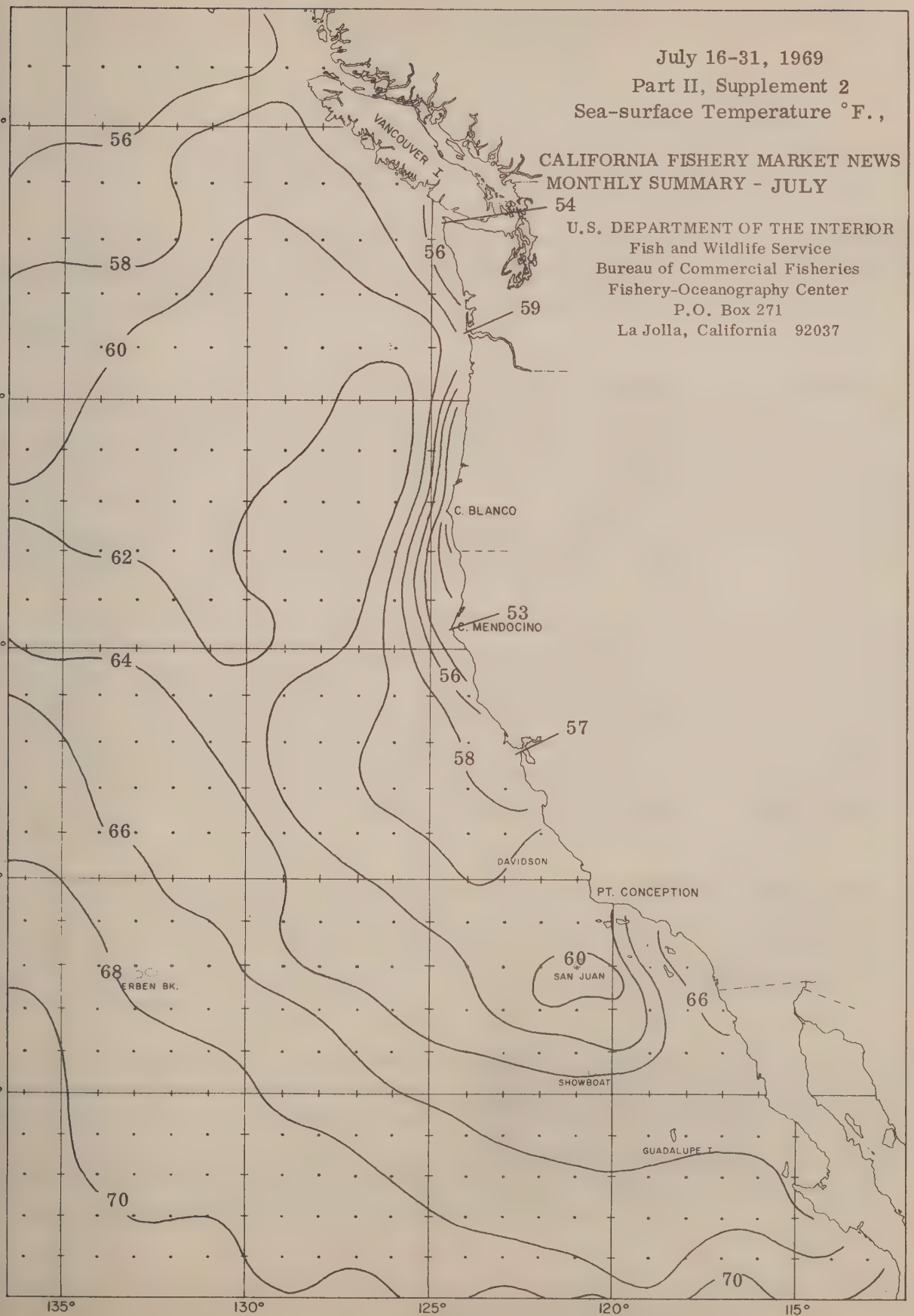

JULY 1-31, 1969
FIG. 3 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JULY 1968. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JULY 1-31, 1969
FIG. 4 - SEA SURFACE TEMPERATURES (°F.) BY 1-DEGREE SQUARES.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
COLOMBIA
ECUADOR
PERU
CHILE
GALAPAGOS IS.
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
COOK ISLANDS
SAMOA ISLANDS
TONGA ISLANDS
UNION ISLANDS
PHOENIX ISLANDS
TUBUAI OR AUSTRAL IS.
BERMUDEZ IS.
Guayaquil
Lima
Callao
Chile
Peru
Panama
Acapulco
Salina Cruz
San Blas
Manzanillo
Honolulu
Tahiti
Rarotonga
Juan Fernandez
Easter I.
Galapagos
Cocos I.
Malpelo I.


JULY 1-31, 1969
FIG. 5- DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM JULY 1968 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GULF OF PANAMA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
Champerico
San Jose
La Union
NICARAGUA
Corinto
Managua
COSTA RICA
Colon
Panama
Balboa
Obaldia
Esmeraldas
San Francisco
Guayaquil
Lobitos
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Cocos I
Clipperton I
Sala y Gomez
S Felix
S Ambrosio
Juan Fernandez
Valdivia
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
40°


JULY 1-31, 1969
FIG. 6 - DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM 12 YEAR MEAN (1947-1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
YUCATAN
GULF OF CAMPECHE
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Chipperton I
Coco I
Colon
Balboa
Esmeraldas
San Francisco
Guayaquil
Lobitos
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Salas y Gomez
S. Felix
S. Ambrosio
Juan Fernandez
Valdivia
Tampico
Vera Cruz
Progreso
Campeche
Coatzacoalcos
Tela de Paco
Kingston
Haiti
Cartagena
Panama
Chiriqui
Taltal
Constitu
Concepcion
Talcahuano
Mocha I
Easter I
Coquimbo
Mas Afuera


July 1-15, 1969
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JULY
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
VANCOUVER I.
58
54
56
60
58
60
C. BLANCO
60
58
62
52
C. MENDOCINO
64
52
54
66
DAVIDSON
PT. CONCEPTION
68
66
ERBEN BK.
SAN JUAN
SHOWBOAT
64
GUADALUPE I
70
68
135°
130°
125°
120°
115°


July 16-31, 1969
Part II, Supplement 2
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JULY
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
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VANCOUVER I.
C. BLANCO
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DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
GUADALUPE I.
ERBEN BK.
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UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
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BULLETIN NO. 69-4

ALBACORE ACTION SLOW FROM SAN DIEGO TO CAPE BLANCO

From San Diego to Cape Blanco, the albacore tuna season has been characterized as--slow. Since the announcement of dockside albacore prices on June 30, boats have put to sea in gradually increasing numbers. The early-season rush has failed to materialize this year, simply because the first catch reports of the season have been scarcely encouraging.

Fish have now been reported from below San Diego to off Coos Bay. Recent catches have been made 40-120 miles southwest of San Diego; 100-150 miles west-southwest of Point Conception; "outside" Davidson Seamount; 150-170 miles west of Cape Sebastian, and 50-150 miles west of Cape Blanco. Not until July 11 did high scores exceed 50-75 fish, and only in the district from Fort Bragg north to Cape Blanco. The first fish of the season at both extremes of the range weighed in at 18-28 pounds. The early arrival of large fish is generally considered to be a "bad sign", because the incoming size class, 10-15 pounds, often comprises up to one-half of the total annual production each year. The first occurrence of 13-pound fish was reported from the northern fishing grounds on July 14.

Prevailing weather north of Cape Blanco has continued literally to dampen prospects for a warm season--overcast skies, rain and windy weather associated with rapidly-moving surface lows have dominated the weather scene for the past 2 weeks. An upper air trough has persisted over the coast through the entire period, forming a small cyclonic eddy on July 5-6, and becoming an open trough again up to July 15. These events have created anomalously strong westerly winds north of Cape Blanco, resulting in increased evaporative cooling, turbulent mixing and cold advection, sharply limiting the rate of advance of the 60° F isotherm toward the Oregon coastline. Concurrent with accelerated northerly wind flow off northern and central California, the first major upwelling pulses of the season occurred in the July 1-15 interval.

Historically, during the July 16-31 interval, the warm upper mixed layer normally advances toward the Oregon coast and increases in east-west dimension as well as depth. The California coast normally experiences declining temperatures near shore from Cape Mendocino to Monterey Bay as upwelling continues. An optimum temperature zone can be expected to occur, however, from 50-150 miles offshore from Point Conception north to Cape Mendocino. This zone may be difficult to fish if strong northerly winds persist over extended periods.

The delayed appearance of albacore has caused some concern in industry circles about the duration and volume of the 1969 production year. Events to date resemble in many respects those experienced in 1963 and 1966, when July production was disappointing. Nevertheless, 1963 proved to be a near-record season by the time September had ended (21 million pounds), and 1966 recorded below-average landings of 37 million pounds. The Pacific Northwest fishery is expected to yield a substantial portion of the total production, but northern California continues to offer promise of a late-season surge if the windy weather abates in late August-early September.

July 15, 1969

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 69-5

ALBACORE FISHING ACTIVITY GAINING SPEED

Albacore fishing activity has gained speed steadily during the past 2 weeks, but events to date indicate that the development of the fishery lags about 2-3 weeks behind last year at the same time. Commercial-scale fishing (more than 100 fish per boat per day) was not widespread until the July 15-21 interval, when the first major center of activity developed off Coos Bay, Oregon. Since that time, full-scale fishing also has developed off Point Conception, where about 50 boats are now working. During the past week, the good fishing area off Coos Bay has dwindled sharply, and a new area appears to be developing about 100-120 miles west of Cape Shoalwater, Washington.

Landings to date are discouragingly low--California has recorded approximately 90-100 tons (180,000-200,000 pounds), establishing a new July low, whereas Oregon will be about 1,100-1,200 tons (2.2-2.4 million pounds), substantially above the 1940-1967 average of about 398 tons (795,000 pounds). Combined U.S. West Coast landings in July will fall in the lowest 25 percent of all years since 1940. August landings should reflect the good fishing experienced during the last week of July--boats fishing off Point Conception have already begun running to Southern California ports to unload their first decent fares of the season, and California landings totals are expected to rise sharply. Boats operating off Washington and Oregon are now contributing about 100 tons per day to Oregon landings, and greater amounts are expected during the next 2 weeks.

Weatherwise, the Eastern North Pacific High has settled into its usual position for the midsummer interval; however, the system is more intense than average, and its mean position is displaced toward the north. Gradually increasing pressures offshore and continuing high temperatures inland have brought partly cloudy skies and strong to very strong northwesterly winds from Cape Blanco south to Point Conception. Winds from 30-50 knots were observed off Oregon and Northern California on July 22-23, and the heavy seas generated by these winds were reported to have caused damage to several vessels off Southern Oregon. Two boats--TROJAN and COMPASS STAR have been reported as missing; the U.S. Coast Guard has instituted search proceedings for both vessels.

Offshore sea surface temperatures appear near average, according to our 1960-1968 data base. The advent of good weather off Oregon and Washington has permitted the summer warming cycle to resume after the interruption in late June. Upwelling has increased substantially from Cape Flattery to Cape Mendocino; Oregon State University-NASA and Coast Guard Airborne Radiation Thermometer flights also indicate an increase in the width of the upwelled zone off Oregon.

The outlook for the first half of August is good--the midsummer weather pattern appears to be solidly in place, and general widespread warming of the upper mixed layer should continue. The warm surface layer will continue to show temperature rises of 1-2° F, and layer depths should increase 10-20 feet on the average. Fishing activity is expected to develop north of the Columbia River plume as far as Destruction Island, Washington. Catches by BCF R/V DAVID STARR JORDAN on the California Cooperative Oceanic Fisheries Investigations anchovy-sardine survey from San Diego to San Francisco during the July 10-31 interval indicate albacore are scattered along the entire stretch from San Juan Seamount to off Pigeon Point outside the upwelled zone about 50-100 miles. Good fishing may develop in this district later on when the winds slacken and the seas abate somewhat.

July 31, 1969

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader